of distribution seriously into account. For most countries he has given us no statistics as to the distribution of the nation's wealth or the nation's earnings among the different classes and grades of workers, and such statistics of distribution as he has offered are quite inadequate. Perhaps it is to be regarded as fortunate, from the standpoint of the student of social welfare, that the scope of Mr. Mulhall's work did not embrace statistics of distribution, since there is doubtless an advantage in having the sufficiency of production firmly established before the question of distribution is taken up for consideration.

FREDERIC W. SANDERS.

Street Railway Franchises. By LEE MERIWETHER, Commissioner of the Bureau of Labor Statistics. Jefferson City, Missouri: State Printers, 1897. 8vo.

Street Railways of Chicago and Other Cities. By GEORGE A. SCHILLING, Secretary Illinois Bureau of Labor Statistics. Chicago: Committee of One Hundred against the Humphrey Bills, George P. Englehard, Chairman, 1897. 8vo, pp. 73.

The Street Railway Problem in Cleveland. By WILLIAM ROWLAND HOPKINS. New York: The Macmillan Company (for the American Economic Association), 1896. 8vo, pp. 86.

The Street Railway System of Philadelphia. Its History and Present Condition. By FREDERICK W. SPEIRS. Baltimore: The Johns Hopkins Press, 1897. 8vo, pp. 123.

THE growing importance of the street-railway property in America is beginning to be recognized by economic students, and they are trying to trace the steps by which shrewd promoters and financiers have been securing millions during the past decade. In every instance the problem of transportation in the great cities is found to be a social and political problem as well as an economic one. Indeed, the economic side of the question is the simplest and least interesting. No investments today are more surely profitable or easily managed than the investments in street railways—if the political complications can be removed. The past decade has been one of rapid change and development, so that the political side has been constantly before the public

by reason of the new privileges which were being sought. Now that the building and change of power in our leading cities is largely accomplished, the consolidation requires attention.

At the outset a lamentable dearth of available information confronts the student. In Massachusetts the Railroad Commission exercises the same control over street railways as over steam roads, and has collected the facts for Massachusetts cities. In a few other states some control is exercised and official reports required. In most instances, however, the street-railway managers have been allowed to give out only the information which they wished the public to have. Their business has been treated not as a public but as a private business, the details of which the public had no right to know. Now that the relations between the street-railway companies and the municipalities are being more carefully studied, and the cities are trying to secure a part of the revenue which hitherto has accrued almost entirely to the corporations, the need of definite information is more clearly felt. In the near future it is to be hoped that some such publicity will be required of the street railways as is now obtained from the steam railways. In the meantime we are glad to have such light upon the subject as is furnished by occasional investigations by labor bureaus and students. Fortunately from these sources good material is being supplied. The refusal of railway officials to give in detail the cost of construction and operation necessarily hampers the investigation, but taking such facts as the roads themselves publish the showing is very favorable to the holder of street-railway stocks, and the amount which they can afford to give the public, either by lowering fares or paying for franchises, appears large.

Mr. Lee Meriwether, in the *Eighteenth Report of the Missouri Bureau of Labor Statistics*, maintains that the St. Louis street railway could afford to pay $1,478,582 per annum, thirty times the $47,500 which they actually pay; that Kansas City should receive from street railways $300,000 per year, but that the council has not exacted a cent; that the failure to secure compensation enables the companies to capitalize their property at more than four times its cost, and pay dividends upon this inflated capital; that a three-cent fare would allow good dividends on capital actually invested; that taxation of street-railway property is grossly inadequate, being only one-fifth of the rate on private property; that these special privileges are given the street-railway companies because of their political power.

All these claims are very forcibly urged and clearly illustrated by diagrams and by comparison with other cities.

In the *Ninth Biennial Report of the Illinois Labor Bureau*, Secretary George A. Schilling and Professor E. W. Bemis have given the best treatment yet made of the street railways of Chicago. They go into the history of the original franchises and their extensions, the building of the roads, the cost of the lines compared with their capitalization and the market value of the securities.

Comparisons are made with street railways in other cities to show the amount of compensation which could be paid here. The legal aspect of the subject is also touched upon. The peculiar method by which Mr. Yerkes has financed the new lines in the north and west parts of the city, keeping the lines separate from the old system in order to secure two fares, building them entirely from the proceeds of bonds made good by the guarantee of the old companies and keeping all the eleven or twelve millions of stock for his profits while he has shifted the risks to the stockholders in the old roads — all this is clearly shown by extracts from a paper prepared by Mr. F. A. Vandelip, now assistant secretary of the U. S. treasury. [This paper was first read before the Political Economy Club of The University of Chicago, and then printed in Rand-McNally's *Bankers' Monthly*. It is a brilliant and accurate account of stock watering in Chicago.]

The report shows that the three main systems in Chicago could be duplicated for 30 million dollars, but are capitalized at 60 million dollars, and their securities have a market value of 90 million dollars. The capitalization per mile in the three systems has increased from $66,838 in 1886 to $126,255 in 1896. Little or nothing is ever written off for depreciation. The Chicago City Railway has not been as brilliantly financed as the North and West Side systems, so its capital is only $90,000 per mile to $145,000 for the Yerkes lines, although the South Side system is as well or better built and equipped. The assessment of the property of the street-railway companies is also less than half that of property in the heart of Chicago, being 4.7 per cent. of the par value, or 3.23 per cent. of the market value of their outstanding obligations, while down-town property is assessed at 9.25 per cent., and outlying property sometimes as high as 25 or 30 per cent. of its market value. The $50 license fee on each car is also evaded so that the city receives only $58,828 instead of the $320,000 which the law requires. If taxes, license fees, and special payments be added together, the total sum paid the city in 1896 is found to be $527,456, while if the street railways had paid on their property the same rate of taxes as is paid by

other Chicago property, their taxes alone would have been $877,148. Thus all the payments to the city are $350,000 short of what the taxes alone should be.

Special value attaches to the report just at this time because of the attempt which the street-railway owners are making to get their enormously valuable privileges extended by the legislature for a period of fifty years. So important did the committee which is leading the fight against the extension deem this report that they had it reprinted for general distribution.

In another form the history of the street-railway experience of Cleveland and Philadelphia has been presented. Curiously enough both of these cities have been through the same kind of a fight that Chicago had to face this year, and in both instances the street-railway companies won. It was the struggle in the Ohio legislature which led to a gathering of the facts presented by Mr. Hopkins in his monograph. He mentions the common tendency to control legislation by corrupt methods, shows that the street-railway interests dominate both political machines and have among their lobbyists United States senators. The consolidation of lines, the large profits, the watered stock are found in Cleveland as in other cities. The over-capitalization seems to have gone even farther in Cleveland than in Chicago. The outstanding securities are four times the cost of duplicating the property on which they were based. Mr. Hopkins does not confine himself so closely to a presentation of facts as did the labor bureau, but considers the various methods of ownership and control. He pronounces against government ownership because the present cost of purchase would be too great. City operation is thought to be impracticable because of the high price paid by the public for labor, and because of the corruption which permeates all political life. The study made by Miss Stewart of the cost of labor under public and private employment in Baltimore, Philadelphia, New York, and Boston (published in the *Bulletin of the U. S. Labor Bureau* for November 1896) throws doubt on this first objection to city operation, and the corruption which all of these and other studies have shown to exist under the present system leaves a doubt as to the possibility of more political evils existing under direct operation than are caused by the franchise-seeking under the present system. Mr. Hopkins, however, favors a system of private ownership and operation, with strict public control, and the exaction of compensation equal to the value of the privileges granted.

The study of the Philadelphia system is rather more extended than that of Cleveland, and as the city is larger the experience is even more valuable and perhaps merits a fuller summary.

FROM the time the first lines were planned in 1857, Philadelphia citizens have had to contend with the peculiar influence which in the hands of franchise seekers has proved so potent in all American cities. The arguments used by citizens of Philadelphia in 1858 against the granting of a charter to authorize cars on Chestnut and Walnut streets are quite similar to those heard today. They were that the company was given large and indefinite powers and that the city got no adequate returns for the privileges granted. But both legislature and council seemed to attach more weight to the arguments of the companies than to the protests of the citizens. For in the two years, 1857 and 1858, eighteen charters were granted. The roads were rapidly built and proved profitable from the first. Within six years the companies were paying from 10 to 45 per cent. on the capital invested, and with the increase of population the returns rapidly increased.

Thirty-nine companies had been granted franchises on the theory that they would compete with each other and thus insure good service at low rates. But the companies had no sooner been formed than an alliance was made, known as the Board of Presidents of City Passenger Railway Companies. From 1859 this combination controlled the policy of all the street railways until 1895 when the separate lines were merged into one gigantic monopoly. The consolidation began in 1864 and within a dozen years half of the companies had been absorbed or had united with their so-called competitors. Further consolidations were made between 1876 and 1883. In the latter year the Philadelphia Traction Co. was incorporated, not for the purpose of building new lines, but to acquire control of lines already in operation. The chief promoters were Messrs. Widener and Elkins, well known as street-railway organizers in Chicago, New York, Pittsburg, and other cities. These gentlemen appreciated the enormous profit that street railways could be made to yield and proceeded to lease and consolidate the original lines. Within two years their traction company controlled 36 per cent. of the city railways. But the Philadelphia Traction Co. was not satisfied with the powers given it by ordinary corporation laws, and so, using its potent political influence, it forced in 1887 the pass-

age of an act providing for the special incorporation of motor companies with large powers. The passage by the general assembly of this act incorporating motor companies aroused intense popular opposition and a great mass meeting was held on March 1, 1887, to protest against its signature by the governor and incidentally to demand the reduction of tariff from six cents to five cents. At that meeting Mr. Wayne MacVeagh made an interesting prophecy, which was fulfilled eight years later: "You may rest assured your street-railway system is destined very soon to be an absolute monopoly; you cannot stop it; legislators cannot stop it. The only question remaining is whether the monopoly shall be owned by the Traction Co. or the whole body of the good people of Philadelphia." Under this act the Electric Traction and the People's Traction companies were formed, and in 1895 the three were leased to the Union Traction Co., thus consolidating all the street railways of Philadelphia.

What the city might have realized if its agents had been wise or honest enough not to grant perpetual franchises is shown by the terms on which the original lines owning the franchises have been leased to the traction companies. For the right to operate these lines the Union Traction Company is paying $3,755,000 annually in addition to payments of interest on all the capital required to build the roads.

For the stock of these lines, which the companies claim cost 36 million dollars to construct, 50 million dollars cash was secured, and the present market value of the stocks of these roads is 120 million dollars. Subtracting cost of construction from market value leaves the value of the franchises which have been given away 84 million dollars.

A most significant fact and one hard to explain in view of the enormous value of the Philadelphia franchises and the sums annually paid for them by the traction company which now operates all the lines is that the city has reserved in the charters the right of purchasing the roads at any time by paying the cost of construction. If the city should exercise this right the $3,755,000 which is now paid to the holders of the franchises would be paid into the city treasury. This shows the strength of the inducement which the companies have to keep control of the city council and to interest as many citizens as they can in the securities of the street railways. This has been accomplished by a systematic and successful effort to get stock of the traction company into the hands of small investors in order that their

self-interest might lead them to shield the magnates from the attacks of an indignant public.

In the same way Mr. Yerkes planned to get legislation which would enable him to get the stock of the new lines on the North and West sides of Chicago into the hands of the public. The bonds, which represent all the capital invested in the roads, have already been bought by the people. If the Yerkes franchises are extended for fifty years he will be able to secure as many millions as the dishonest Pennsylvania officials have given to Mr. Yerkes' partners in Philadelphia at the expense of the city.

WILLIAM HILL.

The Manufacture and Properties of Structural Steel. By HARRY HUSE CAMPBELL. New York: The Scientific Publishing Company, 1896. 8vo, pp. xxi+397.

IN this admirable work the author has rendered a service to all those who desire information about the modern processes employed in the manufacture of steel. The prominence which our country has recently assumed as a producer of iron and steel, and the likelihood that our iron masters will soon become aggressive competitors in the world's markets, have recently directed much attention to these great industries, and therefore this volume is very timely. An intelligent view of the international situation is wholly impossible without a knowledge of the leading characteristics of the iron-ore supplies of the leading producing nations and of the respective advantages offered by the several processes of steel manufacture. The latter information, heretofore very difficult to obtain, has been well presented in limited space by Mr. Campbell. Some few years ago one of our leading statisticians, disclaiming all technical knowledge, ventured in a paper of some length a prediction as to the future location of our iron and steel industries. It is perhaps unnecessary to say that his reputation as a scientific observer and writer was not advanced by this paper among those having a practical knowledge of the manufacture of iron and steel. The mere proximity of the raw materials of iron does not in itself assure the location of furnaces at or near the place where the raw materials are found. Because, for instance, the ore may contain impurities which prevent the use of the cheapest methods of manufacture, and the coal may not be a coking coal.